CULTURAL RESOURCES REPORT FOR THE PROPOSED RED GATE POWER PLANT AND LATERAL PROJECT

ADDENDUM: HISTORIC RESOURCES SURVEY REPORT

Prepared for

South Texas Electric Cooperative, Inc.

Prepared by

Blanton & Associates, Inc.
ENVIRONMENTAL CONSULTING • PLANNING • PROJECT MANAGEMENT
5 LAKEWAY CENTRE COURT, SUITE 200
AUSTIN, TEXAS 78734
512.264.1095

Rebecca Lapham, Alexis Reynolds, and Maryellen Russo

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EXECUTIVE SUMMARY

Blanton & Associates, Inc. (B&A) is contracted to conduct a historic resources survey for the proposed construction of a 24.5-mile natural gas pipeline and electrical power plant in Hidalgo and Starr Counties, Texas. B&A completed this work in accordance with Section 106 of the National Historic Preservation Act (NHPA) under 36 Code of Federal Regulation (CFR) 800. The purpose of the historic resources survey was to identify if any resources listed in or eligible for the National Register of Historic Places (NRHP) are located within the Area of Potential Effect (APE), and if any NRHP-listed or NRHP-eligible properties are located in the APE, assess the project's potential effects to those resources. This effort consisted of documenting, inventorying, and assessing the historic-age resources within the proposed project's APE. The definitions of historic-age resources and APE are as follows:

- ***Historic-age Resources:*** The survey cutoff date was set at 1964, based on National Park Service guidelines which state that in order for a property to eligible for the National Register of Historic Places (NRHP) it must be at least 50 years old. As a result, "historic-age" resources in this report are defined as resources built in or before 1964 (pre-1965).[1]

- ***Area of Potential Effect (APE):*** In accordance with US Environmental Protection Agency (EPA) instruction and informal consultation with the Texas State Preservation Office (SHPO), the APE is 150 feet from the centerline on either side of the proposed pipeline and 0.75 mile from the proposed power plant facility.

B&A historians reviewed the SHPO's *Texas Historic Sites Atlas* to identify the previously identified historic resources listed on the NRHP, designated as National Historic Landmarks (NHL) and Recorded Texas Historic Landmarks (RTHL), on the list of standing structure State Antiquities Landmarks (SALs), and on the list of Official Texas Historical Markers (OTHM) within the APE. No NHL, NRHP, RTHL, OTHM, or SAL resources are located within the APE.

In April 2014, B&A historians performed a historic resources survey and identified 2 properties with 5 historic-age resources located in the APE. B&A historians recommend that none of these historic-age properties are eligible for listing on the NRHP.

As a result of this survey, it is anticipated that no further work will be required in accordance with Section 106 of the National Historic Preservation Act (36 CFR 800).

[1] Properties less than 50 years old or older have to be considered of exceptional importance (see discussion of NRHP Criterion Consideration G in **Section 7.1** for more information about resources less than 50 years old).

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Appendices

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1.0 INTRODUCTION

In April 2014, Blanton & Associates, Inc. (B&A) conducted a historic resource survey of the proposed STEC Red Gate power plant and natural gas pipeline in Hidalgo and Starr Counties, Texas (**Figures 1** and **2** in **Appendix A**). This historic resource survey was completed on behalf of the South Texas Electric Cooperative, Inc. (STEC) for the U.S. Environmental Protection Agency (EPA).

Because the proposed construction involves federal permitting (e.g., Greenhouse Gas Prevention of Significant Deterioration [PSD] permit) by the EPA, the project is subject to the provisions of Section 106 (33 CFR Part 800) of the National Historic Preservation Act (NHPA). The intent of the NHPA is to consider the effects on historic properties by actions that are federally funded, licensed, permitted, or which occur on federal property. As a result, this report was completed in accordance with the Secretary of Interior's (SOI) *Standards for Identification*, and the intended use of this survey report is for compliance activities with the Texas State Historic Preservation Office (SHPO) under Section 106 of the NHPA. This document may also be used in compliance with the National Environmental Policy Act (NEPA) and the Antiquities Code of Texas.

The purpose of the historic resources survey was to identify resources listed in or eligible for the National Register of Historic Places (NRHP) located within the Area of Potential Effect (APE), and assess the project's potential effects to those resources if they are present.

Appended to this report are several appendices that provide maps, graphics, photographs, and other materials that supplement the text included in this report. **Appendix A** includes project location maps and inventoried resource maps labeled as **Figures 1** through **3.8**. **Appendix B** is a summary table that lists the properties that were inventoried in the APE. Survey forms (including photographs) for each of the inventoried resources are in **Appendix C**. Overall photographs of the project area are included as **Photos D1** through **D6** in **Appendix D**. The resumes of this report's preparers are included in **Appendix E**.

The historic resources survey identified 2 properties with 5 historic-age resources. This report recommends that no NRHP-eligible and/or NRHP-listed properties are present within the proposed project's APE. As a result, no effects recommendation is necessary.

2.0 PROJECT DESCRIPTION

The proposed project includes the construction of a power plant in Hidalgo County and an underground pipeline in Hidalgo and Starr Counties. The proposed power plant would be constructed on a 336-acre property along Farm-to-Market (FM) 490, west of United States Highway (US) 281 and approximately 3.8 miles northwest of the town of Faysville. The proposed pipeline would be a 12-inch underground pipeline that extends from northwest Starr County to central Hidalgo County, for a total of 24.5 miles (**Figures 1** and **2**).

The APE for the project is 0.75 mile from the proposed power plant site and 150 feet from the centerline on either side of the pipeline. The APE and proposed pipeline routes are illustrated on **Figures 3.1 – 3.8** in **Appendix A**.

3.0 PROJECT LOCATION AND SETTING

The proposed power plant site is located on the south side of FM 490 approximately 3.8 miles northwest of Faysville. The proposed pipeline is located in central and northwest Hidalgo County and in northeast Starr County, Texas (**Figures 1** and **2**). The APE is primarily rural, consisting of ranching and farming properties. There are scattered residential and commercial properties located on the southeastern and northwestern limits of the proposed project area.

4.0 RESEARCH AND SURVEY METHODOLOGY

The research and survey for this project were conducted in accordance with the Secretary of Interior's *Standards for Identification* and *Standards for Evaluation*. The purpose of the research and field investigations was to identify if any NRHP-eligible or NRHP-listed properties were located within the APE and to assess the project's potential effects to these resources. As a result, the following activities were completed by B&A historians who meet the Secretary of Interior's *Professional Qualifications Standards* for professional historians (see 36 CFR 61) and the methodology used for this project is described below.

4.1 Research

Prior to fieldwork, B&A historians conducted a literature review to gain an understanding of the project area's historical background and significant themes. B&A examined available reports, studies, maps, and other data pertinent to the APE. B&A reviewed SHPO files, the SHPO's Texas *Historic Sites Atlas* Online, and the National Register Information System (NRIS) website to identify properties listed on the NRHP, designated as National Historic Landmarks (NHLs), Recorded Texas Historic Landmarks (RTHLs), or standing structure State Antiquities Landmarks (SALs), and Official Texas Historical Markers (OTHMs) within the APE. There are no NHLs or NRHP-properties, properties designated as RTHLs or SALs, or any OTHMs within the APE.

Before, during, and after the completion of fieldwork, B&A historians conducted research of published and unpublished materials, aerial photographs, and maps that were gathered from on-line sources, as well as repositories in Austin, Edinburg, and Rio Grande City. Information gathered from these sources is presented in **Section 6.0 Historic Context**.

4.2 NPS Guidance, Context Studies, and Field Guides

To aid in the identification and evaluation process, B&A historians utilized National Park Service (NPS) Bulletins and context studies and field guides produced by the Texas Department of Transportation (TxDOT).

NPS Bulletins and Guides:

- *National Register Bulletin: How to Apply the National Register Criteria for Evaluation* (1990, revised 1997)
- *How to Complete the National Register Multiple Property Documentation Form* (1991, revised 1999)
- *Guidelines for Evaluating and Documenting Rural Historic Landscapes* (1989, revised 1999)

TxDOT Context Studies and Field Guides:

- *Agricultural Theme Study for Central Texas* by David W. Moore, Jr. et al (2013)
- *A Field Guide to Irrigation in the Lower Rio Grande Valley* by Lila Knight (2009)
- *South Texas Ranching* by David W. Moore, Jr. et al (2007)

4.3 Field Investigations

NPS guidelines state that historic resources are generally 50 years old or older. As a result, the survey cut-off date was determined to be 1964. Therefore, "historic-age" resources in this report are defined as resources built in or before 1964 (also referenced as pre-1965 resources). EPA instruction and informal consultation with the SHPO determined that the APE is 0.75 mile from the power plant and 150 feet from the centerline on either side of the pipeline.

The week of April 28, 2014, B&A historians conducted a field survey of the project APE. During the survey, B&A historians drove public roads in the APE in order to identify historic properties and potential historic districts in the APE. Right-of-entry (ROE) was available for the majority of the properties where easements were required. However, the properties with historic-age resources (Resource Nos. 1 and 2) had dense vegetation and lacked ROE, therefore limiting photographic documentation. Limitations encountered during fieldwork are noted on the survey forms in **Appendix C**. Photographic documentation of the historic-age properties located within the project APE and images of the inventoried properties are included in **Appendix C**.

5.0 HISTORIC CONTEXT OF THE APE

Hidalgo and Starr Counties are located in the South Texas Plains region of southern Texas. The geography of the area is characterized by loamy surfaces over a mix of brown and red clay subsoils and vegetation consisting of grasses, mesquite, and live oaks. The southernmost portions of both counties abut the Rio Grande River and the United States-Mexico border. The South Texas Plains region was first occupied by numerous Native American tribes, followed by Spanish settlement in the region beginning in the mid-eighteenth century.[2] The land bordering the Rio Grande River was divided into long, narrow lots that extended north and south of the river called *porciones.*[3] Areas further removed from the river were parceled out into much larger land grants, such as the roughly 95,000 acre Santa Anita land grant of which a portion later became known as the McAllen Ranch. The ranch is listed on the NRHP and its NRHP boundary is located approximately 9 miles northwest of the proposed power plant location and 0.5 mile north of the proposed pipeline route, outside of the project APE.[4] The Texas Revolution in the 1830s, followed by the Mexican War in the 1840s, led to political upheaval and disputed territory. In 1848 Starr County was formed and Rio Grande City (formerly known as Rancho Davis) was named

[2] Alicia A. Garza, "Hidalgo County," *Handbook of Texas Online,* http://www.tshaonline.org/handbook/online/articles/hch14 (accessed February 18, 2014).
[3] Lila Knight, *A Field Guide to Irrigation in the Lower Rio Grande Valley*, prepared for the TxDOT Environmental Affairs Division, 2009, 7.
[4] Margaret McAllen and Mary Margaret McAllen, "McAllen Ranch," *Handbook of Texas Online,* http://www.tshaonline.org/handbook/online/articles/apm05 (accessed February 19, 2014).

county seat.[5] In 1852 Hidalgo County was officially established and the town of La Habitación was renamed Edinburg and selected as the county seat.[6]

In the nineteenth century, sheep and cattle ranching was a dominant economic venture. By 1860 Hidalgo County boasted 10,695 cattle and 3,330 sheep while Starr County recorded 4,639 cattle and 19,142 sheep.[7] However, after the Civil War, Texas Fever – a disease spread by cattle ticks – infected much of the cattle in Texas. While Texas cattle with the disease remained fairly healthy, the disease spread to cattle in neighboring states and often proved fatal to those herds. As a result, many neighboring states enforced embargos and quarantines on Texas cattle, which affected the cattle ranching industry for several years.[8] In 1870 the population of Hidalgo County had reached 2,387 and Starr County had roughly 4,154 residents.[9] The first citrus farms in the Rio Grande Valley also appeared during this period. Livestock ranching reached its peak in the area by 1890. That year, Hidalgo County had 6,534 residents, 71,176 cattle, and 20,906 sheep while Starr County had 10,749 residents and 50,966 sheep.[10] Towards the close of the nineteenth century, cotton and corn production gained momentum and helped diversify the economy of the counties. Additionally, the first small-scale irrigation facilities in Hidalgo County were beginning to appear in the late 1890s.[11]

By the early twentieth century, it became clear that in order to remain economically viable, the region needed improved transportation networks for easier movement of goods and livestock. There were very few roads or transportation networks to and from South Texas. Most roads were poorly constructed dirt roads that could be time-consuming to traverse and nearly impossible to use during rainy periods.[12] In 1904 the St. Louis, Brownsville, and Mexico Railway arrived in Hidalgo County, connecting the area to Brownsville to the south and Sinton (near Corpus Christi) to the north.[13] Soon thereafter, the San Benito and Rio Grande Valley Railway reached the region, and as the railroads arrived, settlers began flooding in. In response to the new wave of settlement, many of the larger farms and ranches in northeastern Starr County and throughout Hidalgo County were subdivided into smaller agricultural properties. Large irrigation facilities were also constructed along the Rio Grande in the early 1900s, providing the foundation for future large-scale agricultural production. By 1910 the population had increased to 13,728 in Hidalgo County and 13,151 in Starr County.[14] The population continued to increase in the 1910s as a

[5] Alicia A. Garza "Starr County," *Handbook of Texas Online*, http://www.tshaonline.org/handbook/online/articles/hcs13 (accessed February 19, 2014).
[6] Garza, "Hidalgo County."
[7] Garza, "Hidalgo County" and "Starr County."
[8] Tamara Miner Haygood, "Texas Fever," *Handbook of Texas Online*, http://www.tshaonline.org/handbook/online/articles/awt01 (accessed May 12, 2014).
[9] Garza, "Hidalgo County" and "Starr County."
[10] Garza, "Hidalgo County" and "Starr County."
[11] Knight, 15.
[12] Dora Mae Kelley, "Early Hidalgo Transportation," *The Daily Review Centennial Edition*, 7 December 1952; Knight, 10-11.
[13] George C. Werner, "St. Louis, Brownsville and Mexico Railway," *Handbook of Texas Online*, http://www.tshaonline.org/handbook/online/articles/eqs30 (accessed February 18, 2014).
[14] Garza, "Hidalgo County" and "Starr County."

result of the Mexican Revolution as large groups of Mexicans fled their country and settling in Hidalgo and Starr Counties as farm and ranch workers.[15]

During the post-World War I years, the Rio Grande Valley experienced a second land boom as a result of the passage of bills that allocated funds to war veterans for the purchase of farms, houses, and equipment.[16] In the 1910s, the Hidalgo County seat was moved to Chapin, which was renamed Edinburg, and the former location of Edinburg became the town of Hidalgo. In Starr County, the town of Delmita was established in 1919. Originally named Zaragosa, the small community was located approximately 4.3 miles northeast of the northern limit of the proposed pipeline and served the surrounding ranchers and farmers with a post office and general store. Approximately 1.2 miles to the west of Delmita, the small family community of El Centro was also established around the same time.[17] Despite the establishment of these communities, Starr County's population decreased to 11,809 in 1920. This decrease was largely due to the creation of Brooks County out of Starr County, which delineated a substantial amount of prime agricultural land within Brooks County's borders. In contrast, Hidalgo County had reached 38,110 residents.[18]

In response to the growing population and rising demands of the agricultural industry, additional transportation networks were established in the project area in the 1920s. The first hard surfaced roadway in the region was opened in 1921, connecting the Rio Grande Valley to San Antonio.[19] In 1926, the town of Faysville was established along the St. Louis, Brownsville and Mexico Railway, approximately 3.8 miles southeast of the proposed power plant site. Although the townsite for Faysville was laid out in 1920, it was not until the arrival of the railroad that the town was officially established.[20] Railroad facilities in the region improved throughout the 1920s, making the movement of goods to broader markets much more efficient and reliable. The proliferation of electricity, the ability to produce ice en route, and use of refrigerated railroad cars further aided in the rapid expansion of region's economy and transportation system during the 1920s.[21] Additionally, by 1927 US Highway 96 (present-day US 281) was designated, traveling from Rosenburg via Wharton, Falfurrias, and Faysville to Brownsville. [22]

[15] Karen Gerhardt and Rod Santa Ana III, *Hidalgo County Texas (Images of America)* (Charleston, SC: Arcadia Publishing, 2011), 7.
[16] Knight, 48.
[17] Dick D. Heller, Jr., "Delmita, TX," *Handbook of Texas Online*, http://www.tshaonline.org/handbook/online/articles/hnd08 (accessed May 13, 2014); Heller, "El Centro, TX," *Handbook of Texas Online*, http://www.tshaonline.org/handbook/online/articles/hreml (accessed May 13, 2014).
[18] Garza, "Hidalgo County" and "Starr County."
[19] Knight, 53.
[20] Garza, "Faysville," *Handbook of Texas Online*, http://www.tshaonline.org/handbook/online/articles/hlf11 (accessed February 18, 2014).
[21] Knight, 54.
[22] Texas Department of Transportation, *Highway Designation File, U.S. Highway No. 281*, http://www.dot.state.tx.us/tpp/hwy/us/us0281.htm (accessed February 19, 2014); Texas Department of Transportation, *Highway Designation File, U.S. Highway No. 83*, http://www.dot.state.tx.us/tpp/hwy/us/us0083.htm (accessed February 18, 2014).

In 1930, the population of Hidalgo County had risen to 77,004 but Starr County's population had further decreased to 11,409.[23] Oil and gas were discovered in the 1930s in the lower Rio Grande Valley, and in 1934, the first producing oil well was opened in Hidalgo County.[24] Roadways also continued to be improved throughout the 1930s. Many of the roadways near the project area had been upgraded, and the roadway known today as FM 409 was paved. The portion of US 96 within the project area, traveling through Faysville, became incorporated into the north-south US 281, which extended from Wichita Falls to Brownsville.[25] During that same time period, east-west US 83 was officially designated, travelling from Brownsville via Pharr to Perryton, and which was often referred to as "the longest main street in the world".[26]

By 1940, with the oil and gas discoveries, the population of Hidalgo County had reached 106,059 and in Starr County it was 13,312.[27] Delmita had a population of 20 and El Centro had approximately 25 residents.[28] Larger-scale irrigation districts began appearing, allowing for more extensive farming operations. In Hidalgo County, the current Santa Cruz Irrigation District #15 (SCID #15) was organized in 1941 as the Hidalgo County Water Control & Improvement District No. 15 but construction was delayed until 1947 due to World War II. [29] Simultaneously, road improvements in the valley continued, and FM 681 and FM 490 were officially designated in 1946.

In the late 1940s and early 1950s, the US and Texas saw an increase in ownership of automobiles. The Colson-Briscoe Act in 1949 provided for the widespread improvement of secondary roads throughout the state. This law expanded the road networks in the state and the valley by providing funds for the construction and upgrade of FM and Ranch-to-Market (RM) road systems. The FM/RM transportation network was instrumental for the agricultural industry in the region, facilitating easier transport of goods and livestock from rural areas to the larger state and US highway systems, and thus larger state and national markets.[30]

By 1952, the SCID #15 encompassed 38,660 acres. Its current northern boundary is approximately 0.17 mile southwest of the proposed power plant site (although no features of the irrigation district are within the 0.75-mile project APE).[31] Continued efforts to improve transportation in the area resulted in the designation of FM 2294 in 1954.[32] However, the post-World War II years were not without their share of

[23] Gerhardt and Ana, 7; Texas State Historical Association, "Texas Almanac: Population History of Counties from 1850-2010," http://www.texasalmanac.com/sites/default/files/images/topics/ctypophistweb2010.pdf (accessed May 7, 2014).
[24] Garza, "Hidalgo County."
[25] Texas Department of Transportation, *Highway Designation File, U.S. Highway No. 281* and *Highway Designation File, U.S. Highway No. 83*.
[26] Gerhardt and Ana, 84.
[27] Texas State Historical Association. "Texas Almanac: Population History of Counties from 1850-2010."
[28] Heller, "Delmita, TX" and "El Centro, TX."
[29] Knight, 72.
[30] Texas Department of Transportation, *Farm/Ranch to Market Facts* http://www.dot.state.tx.us/tpp/hwy/fmfacts.htm (accessed November 15, 2013).
[31] Knight, 86.
[32] Texas Department of Transportation, *Highway Designation File, Farm to Market Road No. 2294* https://www.dot.state.tx.us/tpp/hwy/fm2000/fm2294.htm. (accessed May 13, 2014).

difficulties for agricultural production in the lower Rio Grande Valley. A series of freezes, flooding, and droughts destroyed crops and affected livestock production during the mid-twentieth century.[33]

The years following World War II also saw a rise in industrialization and an influx of manufacturing facilities. In an attempt to diversify the economy in the wake of the struggles facing the agricultural sector, the lower Rio Grande Valley became a destination for tourists attracted by the warm, sunny climate. In addition, the oil and gas industry continued to flourish, and the region's growth once again resumed at a rapid pace throughout the latter half of the twentieth century. Between 1960 and 1980 the population of Hidalgo County grew from 180,904 to 283,229.[34] Although Starr County continued to remain fairly rural in nature, it also experienced a population boom, increasing from 17,137 in 1960 to 27,266 in 1980.[35] In 1994, the North American Free Trade Agreement (NAFTA) became official and opened commerce and trade opportunities between the United States and Mexico. Resultantly, the town of Edinburg is a key location for packing and shipping crops in the area and has been termed "'the gateway city' on the NAFTA corridor."[36] By 2010, Hidalgo County boasted 774,769 residents and Starr County had 60,968 residents.[37]

5.1 Historical Themes and Periods of Significance

Based on the historic contexts outlined above, the historical themes and associated periods of significance are as follows:

- **Community Planning and Development, 1848 to 1964**. This period corresponds to the official establishment of Starr and Hidalgo Counties and the 50-year cutoff date.
- **Transportation, 1926-1964.** This period corresponds to the year the St. Louis, Brownsville, and Mexico Railway came through Faysville and the 50-year cutoff date.
- **Agriculture, 1848-1964.** This period corresponds to the official establishment of Starr and Hidalgo Counties. The period of significance ends with the 50-year cutoff date.

6.0 EVALUATION METHODOLOGY

Following the development of the historic context and the field identification of historic-age properties in the APE, B&A historians evaluated the historic-age resources. This section outlines the methodology used in evaluating inventoried resources. The basic NRHP evaluation criteria are outlined with an emphasis on areas of significance and a discussion of the seven aspects of integrity. The objective of the evaluation methodology is to synthesize relevant information to facilitate determinations of eligibility. Application of the evaluation methodology and results of the evaluations are included in **Section 8.0 Survey Results**.

[33] Knight, 76-86.
[34] Garza, "Hidalgo County."
[35] Texas State Historical Association. "Texas Almanac: Population History of Counties from 1850-2010."
[36] Office of the United States Trade Representative, "North American Free Trade Agreement (NAFTA)," http://www.ustr.gov/trade-agreements/free-trade-agreements/north-american-free-trade-agreement-nafta (accessed May 13, 2014); Janette Garcia, *Edinburg (Images of America)* (Charleston, SC: Arcadia Publishing, 2000), 10.
[37] Texas State Historical Association. "Texas Almanac: Population History of Counties from 1850-2010."

6.1 NRHP Evaluation Criteria

Historic-age properties were evaluated for NRHP eligibility using the NPS *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*, which notes that properties that are eligible for the NRHP must:

- Be at least 50 years old
- Meet one of the four following criteria for significance:
  - Criterion A: Event – Significant historical associations with events, trends, or patterns.
  - Criterion B: Person – Significant associations with persons of transcendent importance.
  - Criterion C: Design/Construction – Embody distinctive characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction.
  - Criterion D: Information Potential – Have yielded, or may be likely to yield information, important in prehistory or history.[38]
- Retain and convey historic integrity, as expressed in the seven aspects of integrity; these are outlined in **Section 7.2 Integrity Considerations**.

Certain types of resources that are not usually considered eligible for listing on the NRHP are given special considerations, which the NPS terms "Criterion Considerations." These resource types may include:

- Religious properties (Criterion Consideration A)
- Moved properties (Criterion Consideration B)
- Birthplaces or graves (Criterion Consideration C)
- Cemeteries (Criterion Consideration D)
- Reconstructed properties (Criterion Consideration E)
- Commemorative properties (Criterion Consideration F)
- Properties fewer than 50 years old with exceptional significance (Criterion Consideration G)

[38] It should be noted that NRHP Criterion D is most applicable to archeological sites and districts. Per the *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*, in order for above-ground buildings, structures and objects "to be eligible under Criterion D, they themselves must be, or must have been, the principal source of the important information." In order to obtain this information, it most often requires disassembling or demolishing the above-ground resource in question. As such, the eligibility of above-ground buildings, structures and objects is most readily evaluated under Criteria A, B and C while Criterion D is only applicable in very rare circumstances. Consequently, this HRSR includes detailed discussions of Criteria A, B, and C, and will only address Criterion D when applicable.

6.2 Integrity Considerations

When evaluating historic properties, integrity is an essential part of the evaluation. Resources that no longer retain integrity to convey significance are recommended not eligible for inclusion into the NRHP. Resources that are associated with important historic themes outlined above in the historic context had to meet certain aspects of integrity specific to their context. The following Seven Aspects of Integrity are placed forth by the *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*. B&A historians applied the Seven Aspects of Integrity to resources identified during the survey in order to help determine if the resources meet the requirements necessary to be recommended eligible for inclusion in the NRHP.

Location is the place where the historic resource was constructed or the place where the historic event occurred. The actual location of a historic resource, complemented by its setting, is particularly important in recapturing the sense of historic events and persons. In some cases, the relationship between a resource and its location is destroyed if the property is moved. In such cases, Criterion Consideration B should be reviewed to determine if the property's significance is rooted in its architectural merit or if the property was moved before its period of significance. In general, as applied to historic districts and individually significant resources, their character-defining features should be in their original location.

Individual resources or historic districts should retain their integrity of ***design***. With individual structures, the integrity of design is important in reflecting the resource's historic functions and aesthetics. For example, if the integrity of design is altered in a transverse (gable-end) barn, and the building's form is no longer identifiable or it has been heavily modified, the building is not conveying its original design. As applied to rural properties and landscapes, the NPS rural historic landscapes bulletin states that "geographical factors, including proximity to natural resources, soil fertility, climate, and accessibility, frequently determined the location of rural settlements."[39]

Setting is another aspect of integrity necessary to convey the significance of an individual resource or historic district. Setting refers to the property's character at the time of its historical significance, and it reflects how the property is laid out, as well as its relationship to surrounding features and open spaces. Setting can also provide an understanding regarding the original function of the property. Physical features that constitute the setting of a historic property can either be natural or manmade. As noted in the NPS bulletin on rural landscapes, large-scale elements on an agricultural property or group of properties, such as bodies of water and woodlands, have a significant impact on integrity of setting. Small-scale elements, such as individual features, trees, plants, and ponds, have a cumulative effect on the setting. For agricultural properties in or near the APE, setting would include proximity to transportation resources and water, as well as trees around building complexes. Additionally, the introduction of numerous new and/or large physical features, such as the construction of new residences, building clusters, and wind farms, can negatively affect the integrity of setting. Furthermore, substantial changes in vegetation management

[39] National Park Service, *National Register Bulletin: Guidelines for Evaluating and Documenting Rural Historic Landscapes* (Washington, D.C.: Department of Interior, 1989; revised 1999) 22.

practices that dramatically change the appearance of the landscape can also negatively impact the setting.[40]

Materials are the physical elements of a historic property or district. A resource must retain key exterior materials dating from its period of significance. To accurately date a resource or district to its period of significance, the property's materials should be maintained. Therefore, the replacement of siding, windows, and porches, as well as large additions, affects the resource's ability to demonstrate its age and place within the historic context of the area. Furthermore, if buildings, structures, and historic districts have a substantial loss of historic materials, they cannot illustrate the property's sense of time and place. For rural historic landscapes, vegetation can also be considered a material according to the *National Register Bulletin: Guidelines for Evaluating and Documenting Rural Historic Landscapes* due to its placement and organization by human activity. While plants are expected to change over time due to natural forces such as blights, disease, crop rotation, and weather, changes to vegetation patterns due to non-historic land use techniques or a conscious modification of the landscape's function or use would negatively impact an agricultural property's integrity of materials.

According to the NPS, ***workmanship*** is the "evidence of the crafts of a particular culture or people during any given period in history" and "can be expressed in vernacular methods of construction."[41] This can be translated in individual buildings as decorative brackets on Craftsman-style houses. Specific construction techniques may also illustrate workmanship. On agricultural properties, workmanship is "exhibited in the ways people have fashioned their environment for functional and decorative purposes."[42] On large rural properties, workmanship can be illustrated in the way fields are plowed and/or terraced for contours, and how rangeland vegetation is manipulated. Additionally, roadways, paths, and other structures within a ranch or farm's boundaries can be considered under workmanship because of their dependence upon continual maintenance to keep their functionality intact. Further, workmanship can be reflected in vegetation, small-scale elements, and land uses, as well as in buildings and structures.

Association is the connection between the property and a historic event or person. Association often relies on the presence of extant physical features to help illustrate a property's association. Resources should retain their association through either the significant people who resided there during their historic period, or their association and connection to the various themes outlined in the historic context. When determining whether an agricultural landscape retains its historic association, it is important to note that NPS guidance states that "new technology, practices, and construction… often alter a property's ability to reflect historic associations."[43]

[40] National Park Service, *National Register Bulletin: Guidelines for Evaluating and Documenting Rural Historic Landscapes* 22.
[41] National Park Service, *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*, (Washington, D.C.: Department of the Interior, 1999) 45.
[42] National Park Service, *National Register Bulletin: Guidelines for Evaluating and Documenting Rural Historic Landscapes* 23.
[43] National Park Service, *National Register Bulletin: Guidelines for Evaluating and Documenting Rural Historic Landscapes* 23.

According to the NPS, ***feeling*** is a "property's expression of the aesthetic or historic sense of a particular period of time" and results from the "presence of physical features that, taken together, convey the property's historic character."[44] For individual resources, feeling is reflected in the retention or removal of the property's character-defining features. On an agricultural property, the integrity of feeling is maintained when the integrity of setting, design, materials, and workmanship are intact, which provides the historic sense of agricultural life during the period of significance.

In considering integrity of agricultural properties, the *National Register Bulletin: Guidelines for Evaluating and Documenting Rural Historic Landscapes* provides a list of changes that, if they occur after the period of significance, may result in the reduced historic integrity of an agricultural property. The following list was extracted from page 23 of the bulletin and outlines the changes that may affect the integrity of rural agricultural properties:

- Abandonment and realignment of roadways
- Widening and resurfacing of historic roadways
- Changes in land use and management that alter vegetation, change the size and shape of fields, erase boundary demarcations, and flatten the contours of the land
- Introduction of non-historic land uses…[such as] power plants, other public utilities, subdivision for residential, commercial, or industrial development
- Loss of vegetation related to significant land uses (blights, abandonment, new uses, reforestation, and introduction of new cultivars)
- Construction of new buildings and structures.[45]

More discussion regarding integrity considerations for agricultural properties is included in **Section 7.2** below.

7.0 SURVEY RESULTS

During the survey, B&A identified 2 properties containing a total of 5 pre-1964 resources, inventoried as Resource Nos. 1, 2a, 2b, 2c, and 2d. These resources are mapped on **Figures 3.1** and **4** in **Appendix A**. The results of this survey are presented in the inventory table in **Appendix B**, and photographs of the historic-age resources are included on the survey forms in **Appendix C**. B&A also included representative photographs of non-historic-age resources on each property where historic-age resources are present. The discussions in this section rely heavily on the information presented in **Section 5.0 Historic Context** and **Section 6.0 Evaluation Methodology**.

Visibility and photographic documentation of some residential buildings and agricultural outbuildings was limited, due to the size of the properties, perimeter fencing, and lack of ROE. The limitations are noted below and on the corresponding survey forms in **Appendix C**.

[44] National Park Service, *National Register Bulletin: Guidelines for Evaluating and Documenting Rural Historic Landscapes* 23.
[45] National Park Service, *National Register Bulletin: Guidelines for Evaluating and Documenting Rural Historic Landscapes* 23.

7.1 Resource Evaluations

As noted in **Section 6.0 Historic Context**, Starr and Hidalgo Counties were historically settled by ranchers in the late 1700s and throughout the 1800s. Agriculture continued to be a mainstay of the region's economy throughout the twentieth century, and as such the extant properties within the APE consist of ranching properties.

In developing the evaluation methodology for agricultural resources, B&A reviewed the 2013 *Agricultural Theme Study for Central Texas* prepared for TxDOT. While this study focuses on central Texas, it has widespread application for evaluating ranching properties throughout the state. This study outlines the typical spatial organization of agricultural properties as divided into three zones – the domestic work zone (including house, privy, and domestic sheds), agricultural work zone (including barns, work sheds, and corrals), and fields/pastures (including stock tanks, windmills, and loafing sheds). The size of these zones is largely dependent on the extent of the ranching or farming operations located therein.

7.1.1 Resource No. 1

Resource No. 1 is a collection of sheds located approximately 0.2 mile northwest of Resource No. 2a, on the north side of FM 490 (see **Figures 3.1** and **4**). These agricultural outbuildings are constructed of common materials, exhibiting corrugated and plywood siding and corrugated metal roofs. They appear to be constructed of a mix of new and reused materials. The buildings are surrounded by uncultivated fields and do not appear to be associated with a residence.

Review of historic aerial photography and topographic maps reveals that Resource No. 1 was constructed at some point between 1955 and 1973 (see **Appendix C Survey Forms** for historical maps). No buildings or structures at the location of Resource No. 1 are shown on the 1936 and 1955 Texas Highway Department (THD) maps. Additionally, no buildings, clusters of vegetation indicating the presence of buildings, or drives/paths leading to either are present on the 1955 aerial photograph. A cluster of vegetation appears on a 1961 aerial photograph, but no buildings are discernible and there is no drive or path leading to the vegetation. The 1963 topographic maps shows a drive leading to a windmill at the approximate location of Resource No. 1, and the 1973 aerial photograph shows a drive leading to a cluster of structures and buildings at the same location.

Resource No. 1 does not exhibit unique agricultural practices and has no associated residence to convey a sense of history. Moreover, the sheds are constructed of common materials (likely a combination of new and reused materials) that lack distinctive or unique architectural features. Therefore, Resource No. 1 is recommended not NRHP-eligible under Criterion A, B, or C.

7.1.2 Resource No. 2

Resource No. 2 includes four historic-age resources labeled as Resource Nos. 2a through 2d. They are a cluster of buildings and structures located on the southeastern limit of the proposed project at the proposed power plant site (see **Figures 3.1** and **4**).

Resource No. 2a is a ca. 1930 small one-room building with unpainted and untreated drop wood siding and three one-over-one double hung wood sash windows. The structure's wood-slat roof is missing several sections, the windows are missing their glazing, and the door is no longer attached to the building. The structure sits atop modern concrete foundation piers; as such, the structure was likely moved to its current location in the last several years. Based on the building's siding and one-over-one windows, it appears that it was constructed between 1925 and 1935.

Resource No. 2b is a privy located southwest of the residential structure. It is constructed of chicken wire and vertical wood boards, and the roof is corrugated metal. It was likely constructed at the same time as the house. The chicken wire has detached from the siding in several sections, and some of the siding is showing deterioration.

Resource No. 2c appears to be a corral and livestock chute. While its construction date is unknown, it may be historic-age and therefore is inventoried as a historic-age resource. It is located approximately 300 feet southeast of Resource Nos. 2a and 2b. The resource is missing several of its horizontal wood rails.

Resource No. 2d is a steel pipe open structure with corrugated metal roof. Like Resource No. 2c, its construction date is unknown, but it may be historic-age and therefore is inventoried as a historic-age resource. It has a concrete floor and likely was used to cover and maintain equipment. It is located approximately 290 feet southeast of Resource No. 2c.

The 1936 and 1955 THD maps, as well as the 1955 aerial photograph, show no structures or buildings on the property. A 1961 aerial photograph indicates that two drives extend from FM 490 into the dense vegetation. One driveway leads to the area where the residential structure and privy are located; however, the vegetation obscures any buildings that may be present. The 1963 topographic map does not show any buildings on the property but it does label a well near the location of the small residential building. Review of the 1973 aerial photograph indicates that two structures are located near the location of the residential structure. It appears the long rectangular structure is no longer extant. Dense vegetation obscures Resource Nos. 2c and 2d (see **Appendix C Survey Forms** for historic imagery).

Research did not reveal that Resource Nos. 2a-2d have significant historical associations with persons or events outlined in **Section 5.0 Historic Context**, and therefore they are recommended not eligible under Criterion A or B. They are also architecturally indistinct and do not represent a specific type, period, method of construction or work of a master and do not possess high artistic value elevating them to the level of significance necessary for NRHP-eligibility under Criterion C. Their advanced state of deterioration significantly compromises their integrity of materials, design, workmanship, feeling, and location. Additionally, since Resource No. 2a was likely moved to its current location at a later date, its integrity of location is compromised. Therefore, Resource Nos. 2a-2d are recommended not eligible under Criterion C.

7.2 Rural Historic Landscape

Since both Starr and Hidalgo Counties are rural and have a long history of ranching, B&A evaluated the agricultural properties within the APE as a potential rural historic district. Following guidance set forth in

the NPS publication *National Register Bulletin: Guidelines for Evaluating and Documenting Rural Historic Landscapes*, B&A reviewed and summarized the landscape characteristics (as outlined below) as they relate to the agricultural properties within the APE:

- Land Uses and Activities
- Patterns of Spatial Organization
- Response to the Natural Environment
- Cultural Traditions
- Circulation Networks
- Boundary Demarcations
- Vegetation Related to Land Use
- Buildings, Structures, and Objects
- Clusters
- Archeological Sites
- Small-scale elements

The area has remained largely agricultural since settlement began in the late 1700s. Large-scale ranches carved out of land grants consumed most of the available land, such as Rancho San Juanito (later the McAllen Ranch) and in the late 1800s, Laguna Seca Ranch. By the turn of the twentieth century, farmers began arriving in the region, converting some of the land into cultivated fields of corn and cotton where possible. Advances in irrigation in the late 1920s and throughout the 1930s allowed for large-scale farming operations south of the project area; however, land use in the project area still continues to consist primarily of ranchland. There are also scattered cultivated fields in the project area. A review of current aerial imagery reveals that there is a variety of modern vegetation management activities occurring on the ranches throughout the project area and APE. These management practices are typically completed for wildlife management and cattle grazing. Oil and gas extraction has also increased in the project area, and gas well pads are common on the landscape. Scattered residences and agricultural outbuildings are located throughout the project area.

As mentioned in **Section 6.0 Historic Context**, one of the earliest formal road networks within the APE was US 96, completed in the late 1920s. The roadway was incorporated into US 281 in 1935. FM 490, on the southeastern limit of the proposed project, and FM 681, near the center of the proposed project, were both designated in 1946. FM 2294 on the northwestern limit of the proposed project was not designated until almost ten years later in 1954. Adjacent road networks consist primarily of gravel county roads or dirt roads traveling between fields and pastures. Review of historical aerial photographs and highway and topographic maps indicate that patterns of spatial organization, especially in terms of relation to road networks, have remained fairly unchanged since the early and mid-twentieth century. Review of historic aerial photographs and maps also shows that the natural environment, including streams and creeks, throughout the area remain unchanged since the historic-age period.

Although Spanish did settle the area in the mid 1700s and additional settlement by residents of Mexico occurred in the 1800s, there is no indication that their cultural traditions are translated to visible

manifestations on the landscape within the project APE. There do not appear to be any ethnic or religious cultural traditions that have impacted the way the land in the region is used. As mentioned above, broad external circulation networks, such as railway and road corridors, appear to have remained fairly consistent within the area. That said, potential early external transportation networks, such as cattle trails or stage coach lines, are no longer extant. The historic placement and location of internal circulation networks on individual properties was not investigated in detail. Buildings on agricultural properties within the APE range from the 1930s to the 1960s and later, showing that development has not remained static, but rather it has occurred over a broad period of time. It is possible that over the years larger agricultural properties were subdivided into smaller parcels, suggesting that internal circulation networks on individual properties have evolved as construction of new ranch and farm houses and associated outbuildings followed the subdivision of land. Similarly, the subdivision of land most likely has impacted historic boundary demarcations. The wide range of construction dates of buildings, structures, and objects, further impacts the area's cohesiveness with respect to local traditions and history. For example, the historic-age buildings within the APE were built between the 1930s and the 1960s, and thus do not reflect the era of early agricultural development that contributed significantly to the development of the area. Resource No.1 does not have an associated main residence, and Resource No. 2a was likely moved to its current location. As a result, it is difficult to evaluate the agricultural properties as clusters of buildings and features that may convey information about historical or continuing activities.

While land use activities, broad patterns of spatial organization, and the natural environment appear to remain largely unchanged within the APE, many of the other historic landscape characteristics have been altered or modified, or do not represent a cohesive historical narrative that defines the agricultural development of the region. Furthermore, the range in construction dates of resources on individual properties from ca. 1930 to ca. 2000 negatively impacts the integrity of feeling and association. The prevalence of non-historic-age buildings within the project area and the subdivision of land, combined with intrusions on the landscape such as gas well pads, have irrevocably altered the area's setting. Lastly, there is not a collection of important historic ranches in the area that could constitute a rural historic landscape. Since the resources in the area are scattered, there is a distinctive lack of cohesion and continuity in the built environment. For these reasons, it is recommended that there is not an NRHP-eligible rural historic landscape in or partially within the APE.

8.0 CONCLUSIONS

B&A recommends that the 2 historic-age properties and the corresponding 5 historic-age resources located in the APE are not eligible for the NRHP. As such, no effects recommendation is necessary. No further work is recommended to complete compliance activities under Section 106 of the NHPA.

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Appendix A

Maps and Figures

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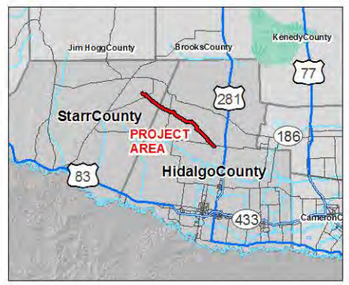
Figure 1
Project Location on County Base
Red Gate Power Plant and Lateral
Hidalgo and Starr Counties, Texas

Proposed Pipeline
STEC Property
Mainline Valve Setting



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Base Map: ESRI-USA Base Map,
ESRI-U.S. and Canada Detailed Streets

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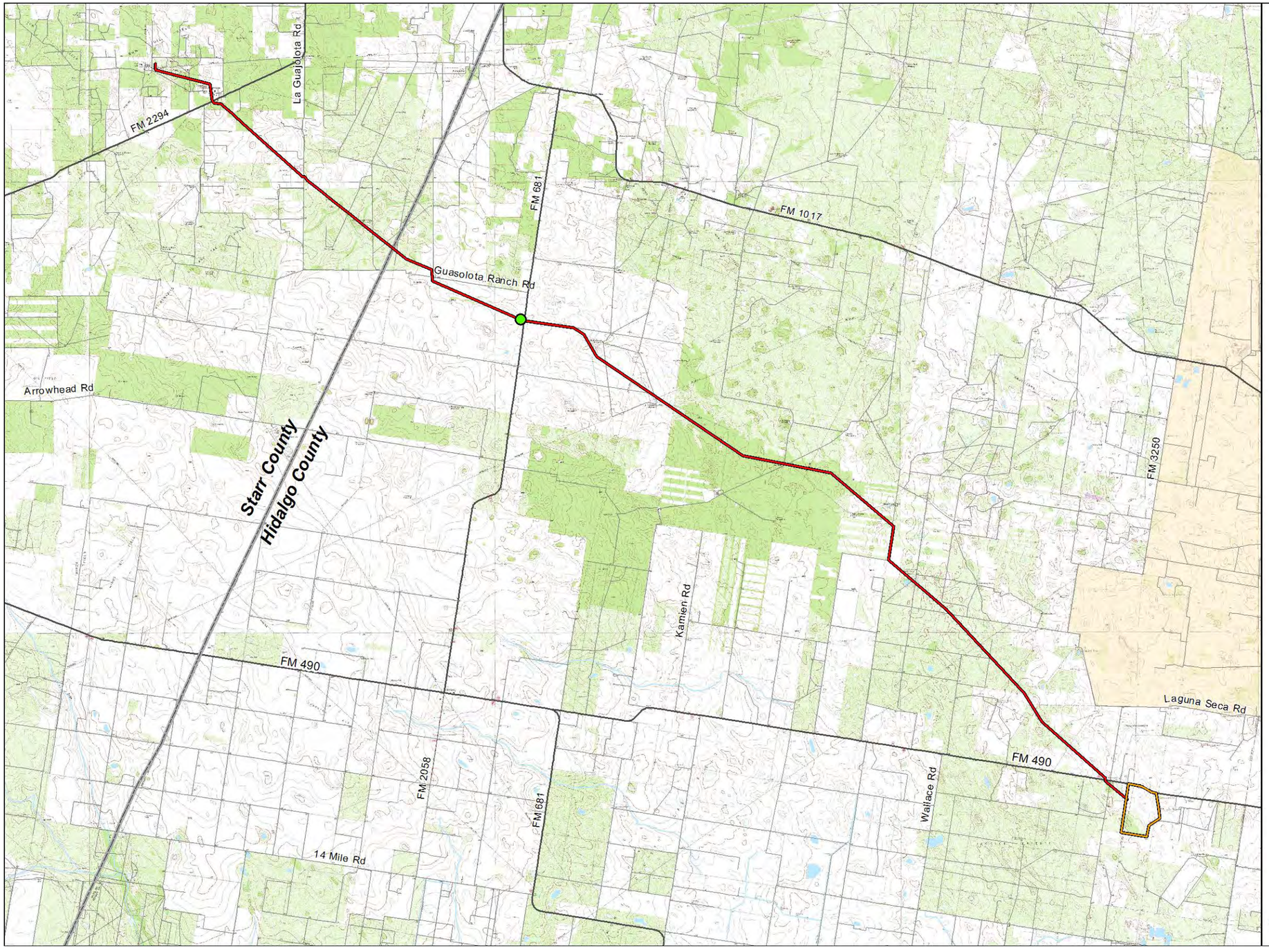
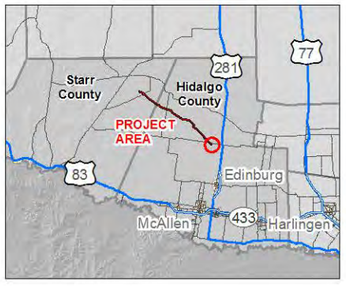
Figure 2
Project Location on USGS
Red Gate Power Plant and Lateral
Hidalgo and Starr Counties, Texas





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Base Map: USGS Topographic, Starr and Hidalgo Counties, Texas
ESRI-U.S. and Canada Detailed Streets

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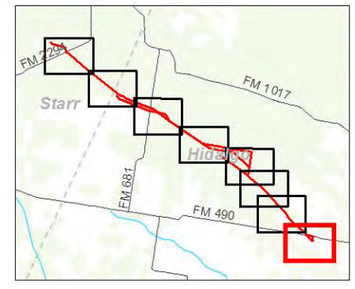
Figure 3.1
Inventoried Resource Map
Red Gate Power Plant and Lateral
Hidalgo and Starr Counties, Texas

- Inventoried Resource
- Proposed Pipeline
- Plant Site
- Area of Potential Effect (150 feet from pipeline centerline, 0.75 mile from power plant site)
- Parcel



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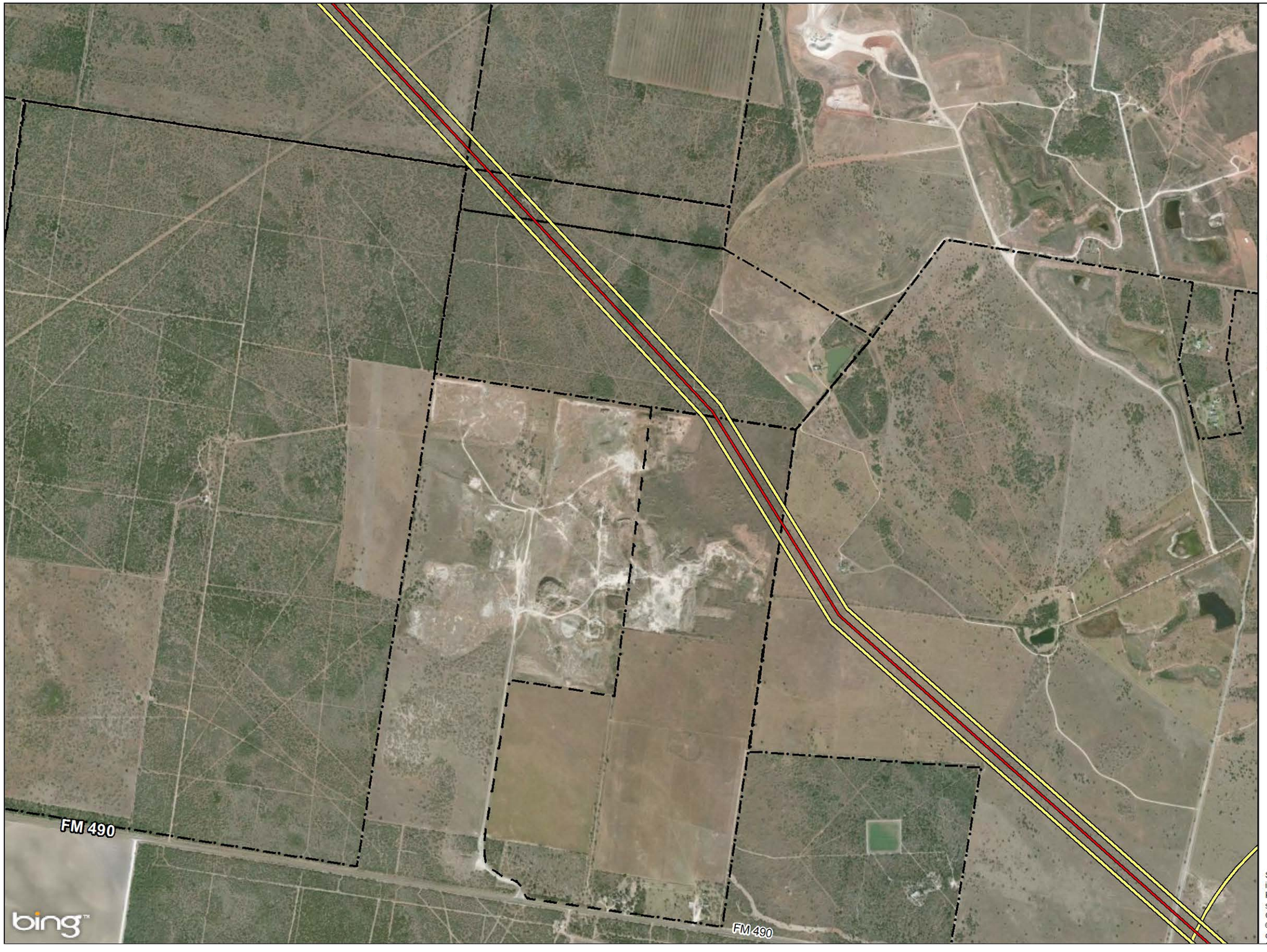

Figure 3.2
Inventoried Resource Map
Red Gate Power Plant and Lateral
Hidalgo and Starr Counties, Texas

Inventoried Resource
Proposed Pipeline
Plant Site
Area of Potential Effect
(150 feet from pipeline centerline,
0.75 mile from power plant site)
Parcel

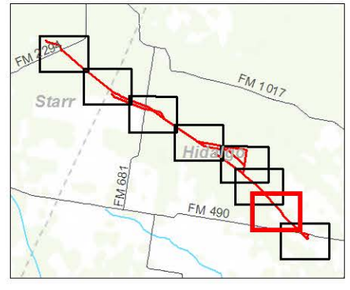

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Figure 3.3
Inventoried Resource Map
Red Gate Power Plant and Lateral
Hidalgo and Starr Counties, Texas

Inventoried Resource
Proposed Pipeline
Plant Site
Area of Potential Effect
(150 feet from pipeline centerline,
0.75 mile from power plant site)
Parcel

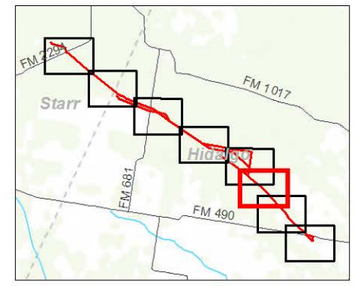

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Figure 3.4
Inventoried Resource Map
Red Gate Power Plant and Lateral
Hidalgo and Starr Counties, Texas

Inventoried Resource
Proposed Pipeline
Plant Site
Area of Potential Effect
(150 feet from pipeline centerline,
0.75 mile from power plant site)
Parcel

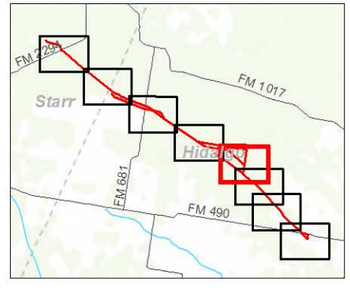

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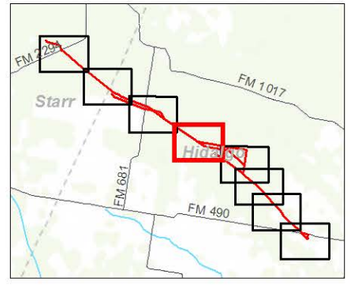
Figure 3.5
Inventoried Resource Map
Red Gate Power Plant and Lateral
Hidalgo and Starr Counties, Texas

Inventoried Resource
Proposed Pipeline
Plant Site
Area of Potential Effect
(150 feet from pipeline centerline,
0.75 mile from power plant site)
Parcel



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Service Layer Credits: Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
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Figure 3.6
Inventoried Resource Map
Red Gate Power Plant and Lateral
Hidalgo and Starr Counties, Texas

- Inventoried Resource
- Proposed Pipeline
- Plant Site
- Area of Potential Effect (150 feet from pipeline centerline, 0.75 mile from power plant site)
- Parcel

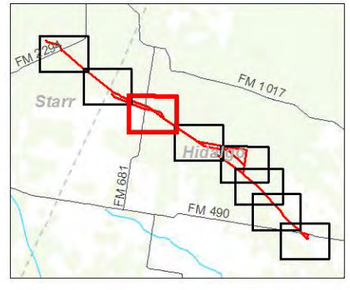

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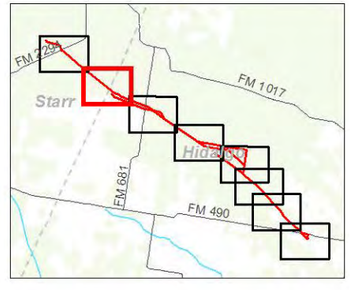
Figure 3.7
Inventoried Resource Map
Red Gate Power Plant and Lateral
Hidalgo and Starr Counties, Texas

Inventoried Resource
Proposed Pipeline
Plant Site
Area of Potential Effect
(150 feet from pipeline centerline,
0.75 mile from power plant site)
Parcel



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Service Layer Credits: Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
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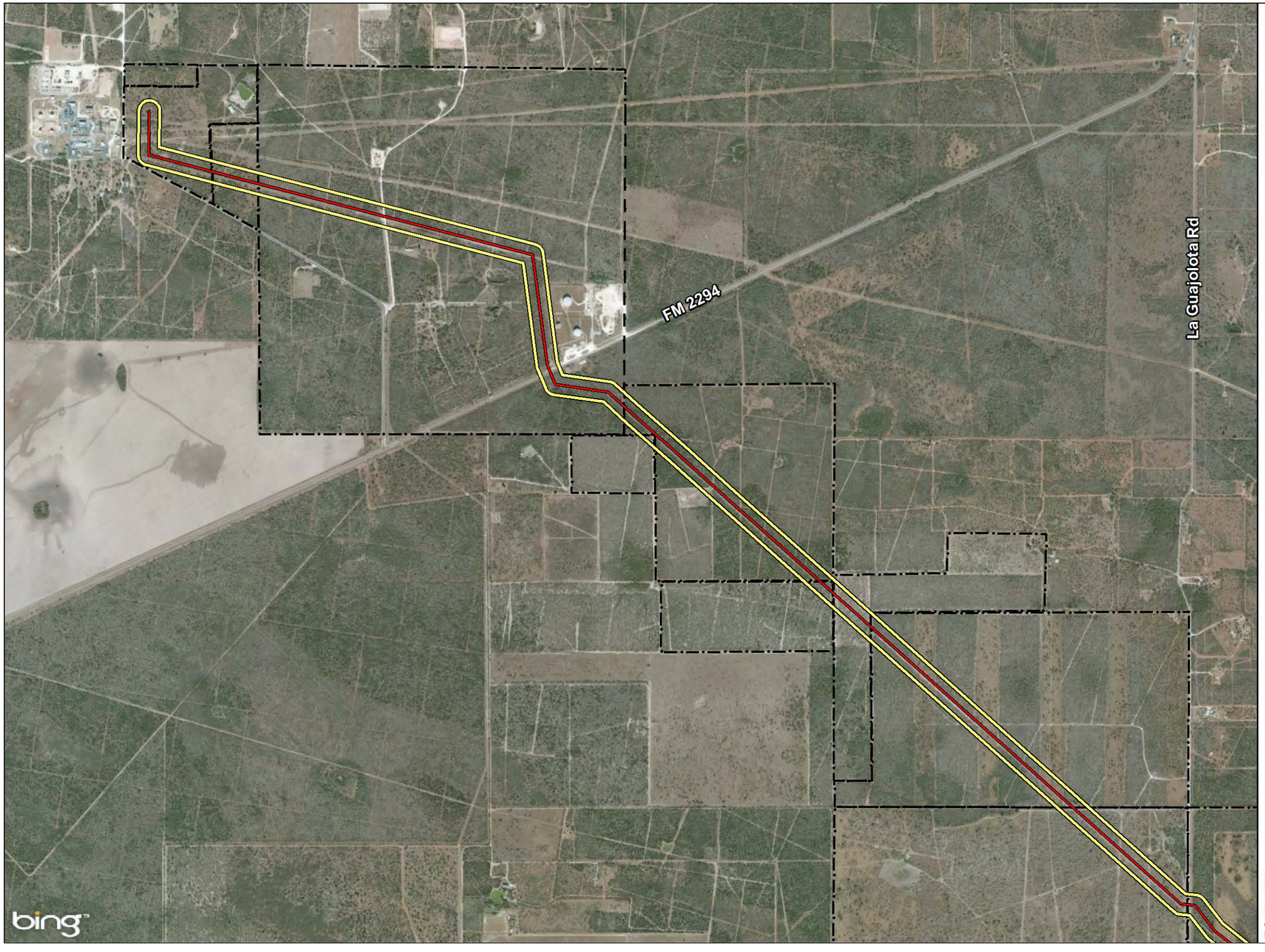
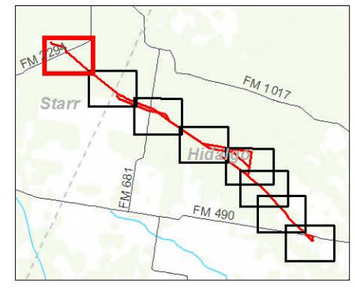


Figure 3.8
Inventoried Resource Map
Red Gate Power Plant and Lateral
Hidalgo and Starr Counties, Texas

- Inventoried Resource
- Proposed Pipeline
- Plant Site
- Area of Potential Effect (150 feet from pipeline centerline, 0.75 mile from power plant site)
- Parcel



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Service Layer Credits: Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
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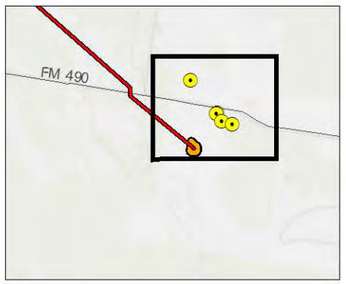
Figure 4
Inventoried Resources 1-2d
Red Gate Power Plant and Lateral
Hidalgo and Starr Counties, Texas

- Inventoried Resource
- Proposed Pipeline Routes
- Plant Site
- Area of Potential Effect (150 feet from pipeline centerline, 0.75 mile from power plant site)
- Parcel



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Service Layer Credits: Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
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Appendix B

Historic Resources Inventory

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Resource No.	Address/ Location	Function/ Sub-function	Form/ Type	Architectural Style	Date(s)	Integrity/ Comments	NRHP Eligibility
1	Lat: -98.1808792/ Long: 26.46051197	Agriculture/ Agricultural Outbuilding	Flat and side-gable/ Massed	No style	Ca.1960	Constructed of common materials including plywood and corrugated metal. No distinct style or method of construction	Not eligible
2a	Lat: -98.17800612/ Long: 26.45740356	Domestic/ Single dwelling	Front-gable/ Rectangular	No style	Ca. 1960	Several sections of roof materials are missing, window glazing is missing, door no longer attached to building. Building likely moved to current location at a later date.	Not eligible
2b	Lat: -98.17811162/ Long: 26.4573472	Domestic/ Secondary structure	Shed-roof/ Massed	No style	Ca. 1930	Chicken wire detached from siding, some deterioration in siding	Not eligible
2c	Lat: -98.17755691/ Long: 26.45662096	Agriculture/ Animal facility	Livestock chute and corral	No style	Construction date unknown (may be historic-age)	Some deterioration and missing wood rails	Not eligible
2d	Lat: -98.17645367/ Long: 26.45631423	Agriculture/ Storage	Shed roof/ Massed	No style	Construction date unknown (may be historic-age)	Constructed of common materials corrugated metal roofing with metal pipe supports. No distinct style or method of construction	Not eligible

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Appendix C

Historic Resources Survey Forms

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Resource No: 1

Latitude/Longitude: -98.1808792/26.46051197

Address: Unknown

Function: Agriculture

Construction Date: ca. 1960

Comments: This resource includes several sheds constructed of plywood and corrugated metal. Dense vegetation and lack of ROE limited photographic documentation of the sheds.

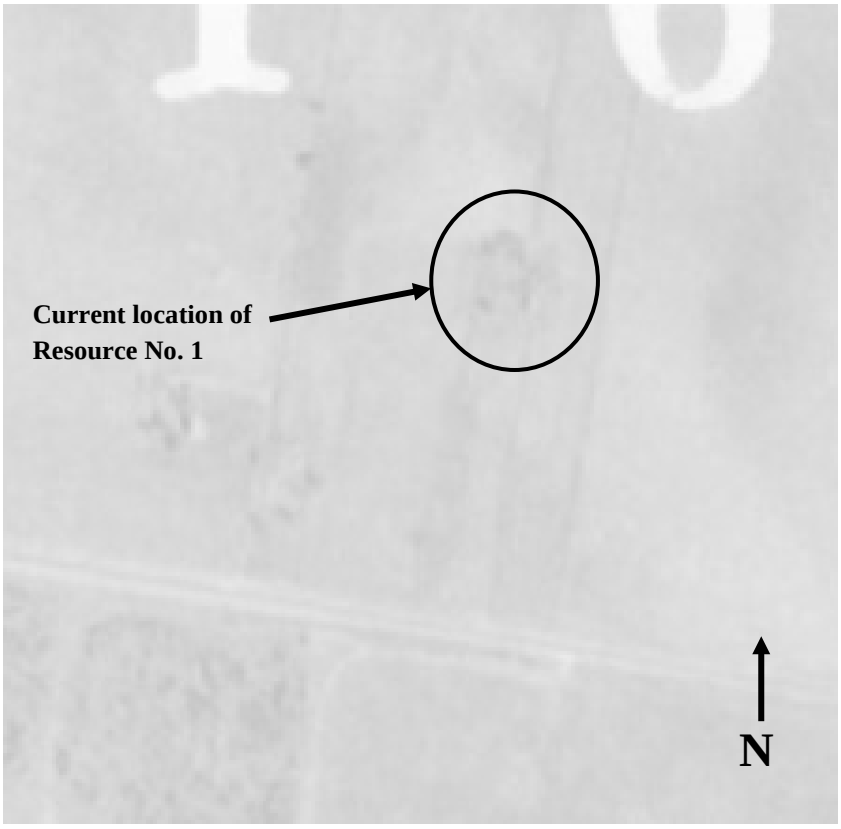
NRHP Eligibility: Not eligible

Resource No. 1, facing north

Resource No. 1

Current aerial photograph of Resource No. 1, facing north (Base image courtesy of Google Earth)

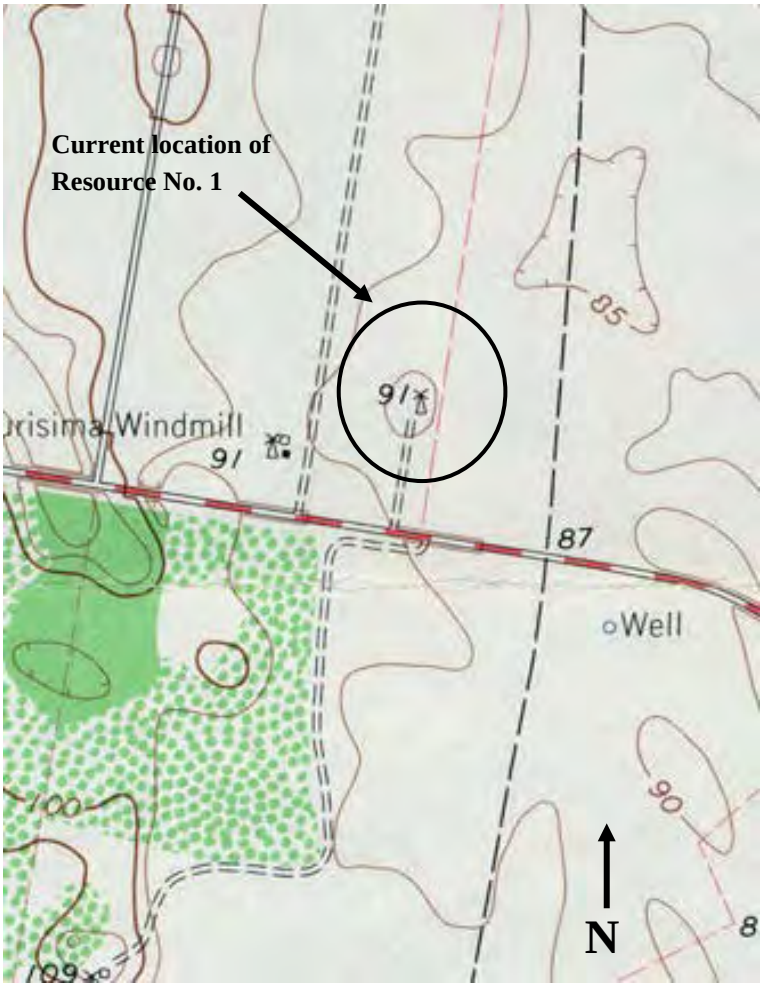
Resource No. 1



Cluster of vegetation and location of present-day Resource No. 1 on 1961 aerial photograph, facing north

(Base image courtesy of USGS)

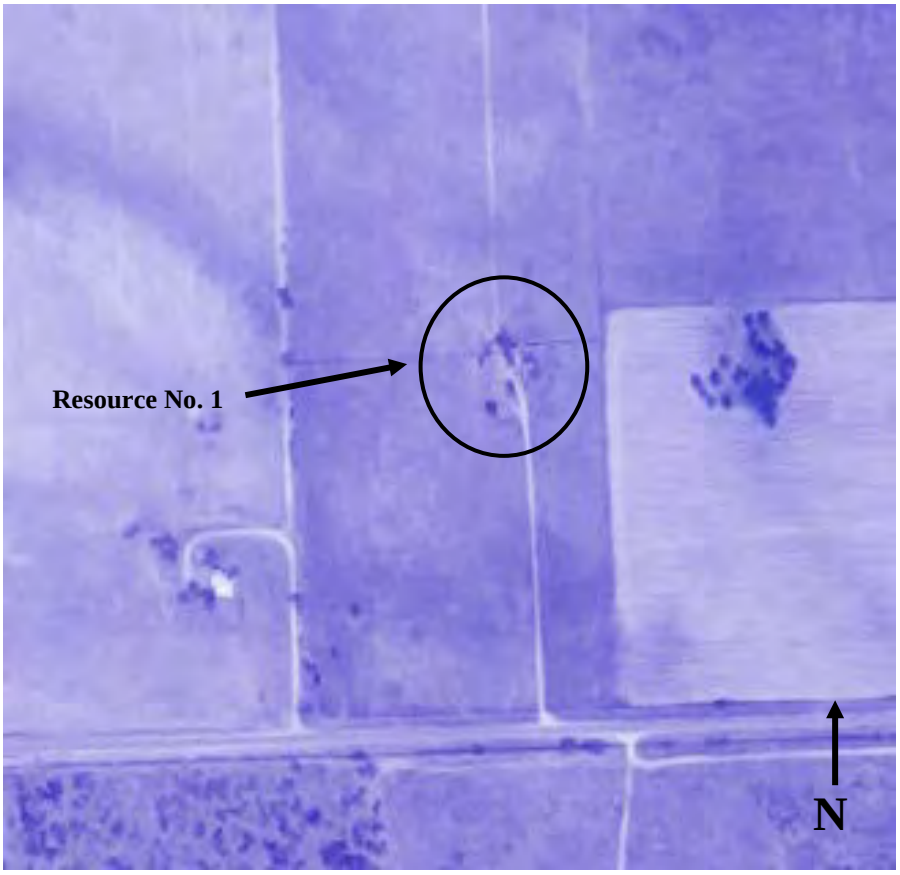
Resource No. 1



1963 topographic map showing the no longer extant windmill at the location of Resource No. 1, facing north

(Base image courtesy of USGS)

Resource No. 1



1961 aerial photograph showing cluster of vegetation and location of present-day Resource No.1, facing north

(Base image courtesy of USGS)

Resource No: 2a

Latitude/Longitude: -98.17800612/26.45740356

Address: Unknown

Function: Domestic

Construction Date: ca. 1930

Comments: This gable-roof building has horizontal wood siding and one-over-one windows. Sections of the roof are missing, as well as the window glazing and the front door. The building also rests on concrete piers, indicating that it was moved to this location at a later date. Most likely this building was a temporary residence for seasonal workers or was used during the hunting season.

NRHP Eligibility: Not eligible

Resource No. 2a facing west

Resource No. 2a

Resource No. 2a facing north

Resource No: 2b

Latitude/Longitude: -98.17811162/26.4573472

Address: Unknown

Function: Domestic

Construction Date: ca. 1930

Comments: This shed roof building is a privy associated with Resource No. 2a. It consists of a corrugated metal roof, vertical wood siding, and chicken wire. Some of the chicken wire has detached from the siding and there is evidence of deterioration and rot in the siding.

NRHP Eligibility: Not eligible

Resource No. 2b facing southwest

Resource No. 2b

Resource No. 2b facing northeast

Resource No: 2c

Latitude/Longitude: -98.17755691/26.45662096

Address: Unknown

Function: Agriculture

Construction Date: Unknown (May be historic-age)

Comments: This wooden livestock chute and corral is located to the southwest of Resource Nos. 2a and 2b. The chute and corral are missing several sections of the horizontal wood rail.

NRHP Eligibility: Not eligible

Resource No. 2c facing southwest

Resource No. 2c

Resource No. 2c facing south

Resource No: 2d

Latitude/Longitude: -98.17645367/26.45631423

Address: Unknown

Function: Agriculture

Construction Date: Unknown (May be historic-age)

Comments: This open metal pipe pavilion was likely used to cover equipment. The structure has a corrugated metal roof, metal pipe supports, and concrete floor.

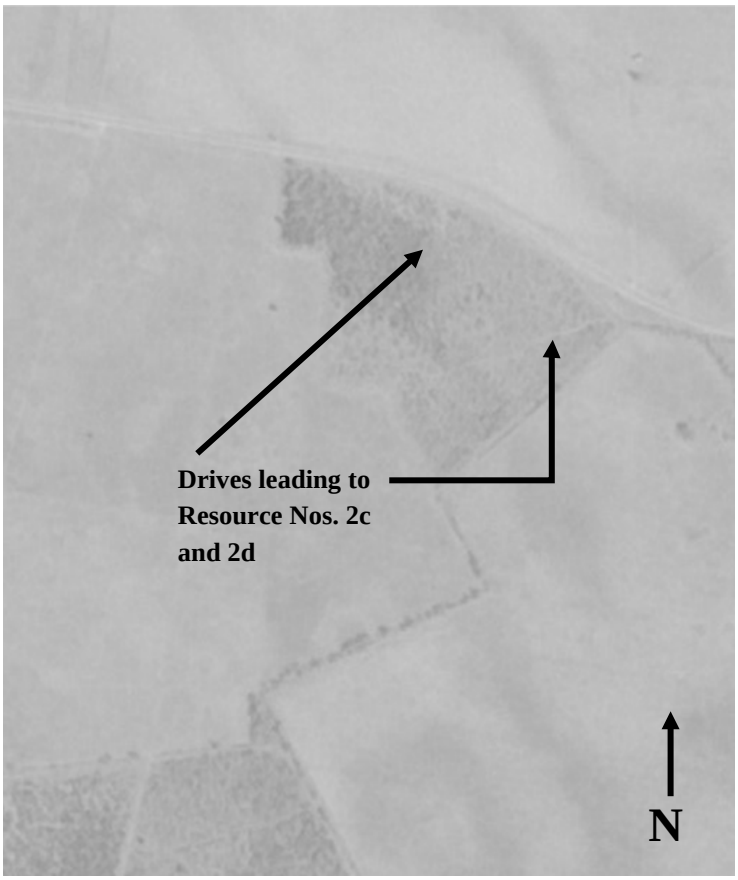
NRHP Eligibility: Not eligible

Resource No. 2d facing south

Resource No. 2d

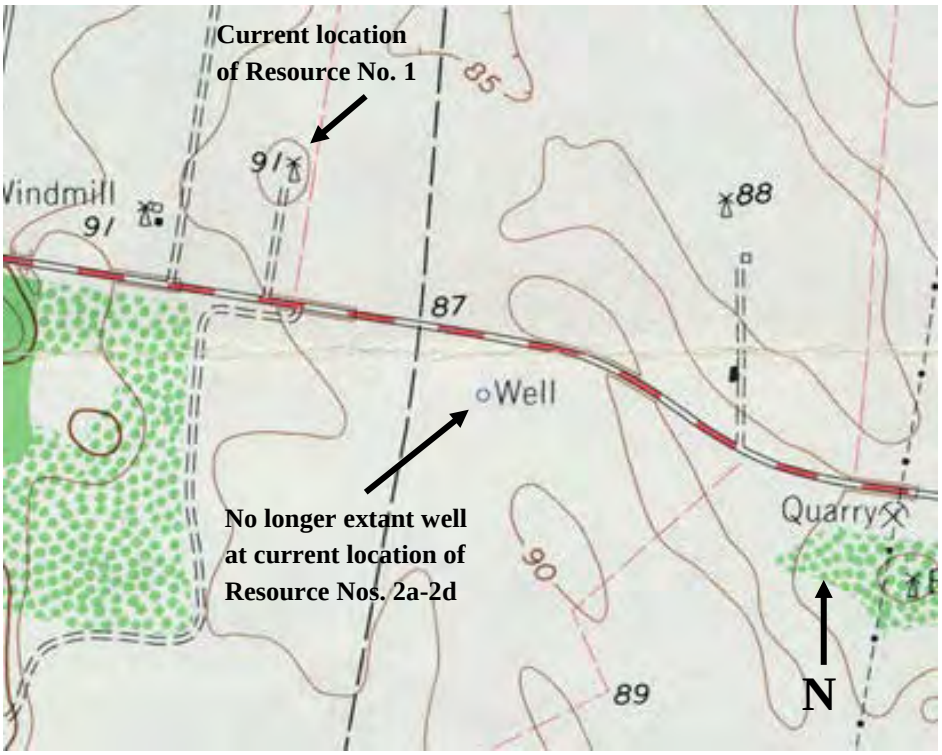
Resource No. 2d facing west

Resource Nos. 2a-2d



1961 aerial photograph showing drives leading to Resource Nos. 2c and 2d (Base image courtesy of USGS)

Resource Nos. 2a-2d



1963 topographic map showing current location of Resource Nos. 2a-2d, facing north (Base image courtesy of USGS)

Resource Nos. 2a-2d

1973 aerial photograph showing location of Resource Nos. 2a and 2d, facing north. Dense vegetation obscures Resource Nos. 2c and 2d. (Base image courtesy of USGS)

Appendix D

Project Area Photographs

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Photo D1: Near northwestern limit of proposed project along FM 2294, facing northeast

Photo D2: Near middle section of project along FM 681, facing northwest

Photo D3: Near middle section of project along FM 681, facing southeast

Photo D4: Representative non-historic-age residence located near the project area, facing north

Photo D5: Representative non-historic-age agricultural outbuilding located near the project area, facing east

Photo D6: Southeastern limit of proposed project, facing northwest

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Appendix E

Preparer's Resumes

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REBECCA LAPHAM

Education
M.S., Historic Preservation, University of Texas, 2012.

B.A., European Studies, Minor in History, Scripps College, Claremont, California, 2006.

Continuing Education
Certificate : Essentials of Section 106, Advisory Council on Historic Preservation, Seattle, Washington, 2008.

Professional Experience
Blanton & Associates, Inc., 2012 to Present
Historian. Ms. Lapham performs intensive- and reconnaissance-level historical, architectural, and cultural resource management investigations. This entails conducting fieldwork, research, and surveys; identifying and documenting cultural resources; and developing historic contexts, National Register of Historic Places nominations, and HABS/HAER-level documentation.

Entrix, Inc., Environmental Consultants, Seattle, Washington 2008 to 2010
Staff Historian/Cultural Resources. Ms. Lapham performed reconnaissance level historic resources surveys, including GIS data collection, documentation of historic buildings, and entering site forms into the Washington Department of Archaeology and Historic Preservation (DAHP) historic database. She organized multiple government-to-government consultation meetings and communicated with numerous Indian tribes and local, state, and federal agencies in accordance with Section 106 of the National Historic Preservation Act. Ms. Lapham coordinated team projects, including budgeting, marketing, Health and Safety Plans, preparation and editing of project deliverables and administrative records. She researched archaeological and historical information at state libraries, archives and DAHP.

The International Center, Viña del Mar, Chile, 2007
Marketing Assistant. Ms. Lapham designed and implemented an internet marketing campaign, increasing program participation. She procured new leads for company expansion within South America. She translated and updated English and Spanish versions of website and company brochure.

Strategic Solutions NW, Portland, Oregon. 2006 to 2007
Accounts Specialist/Consultant. Ms. Lapham aided in a large-scale financial merger between two international lumber companies. She provided accounting services such as creating, processing and distributing invoices, tracking and maintaining vendor activities, and reconciling bank statements. She communicated daily with both vendors and customers about outstanding payments and open accounts.

Publications/Project Experience
Research Design for Historic Resources Survey, FM 1516 from FM 78 to FM 1976, Converse, Bexar County, Texas. September 2013. Prepared for Texas Department of Transportation San Antonio District.

Reconnaissance Level Historic Resources Survey Report, SH 288 Direct Connectors to the Texas Medical Center Area, Harris County, Texas. September 2013. Prepared for Federal Highway Administration and Texas Department of Transportation Houston District.

Research Design for Historic Resources Studies, SH 288 Direct Connectors to the Texas Medical Center Area, Harris County, Texas. September 2013. Prepared for Texas Department of Transportation Houston District.

Reconnaissance Level Historic Resources Survey Report, IH 35 at Bud Stockton Loop/CR 313, Williamson County, Texas. April 2013. Prepared for Texas Department of Transportation, Austin District.

National Register of Historic Places Nomination, SH 16, Palo Pinto County, Texas. March 2013. Prepared for Texas Department of Transportation Environmental Affairs Division.

Research Design for, Historic Resources Studies, IH 35 at Bud Stockton Loop/CR 313, Williamson County, Texas. February 2013. Prepared for Texas Department of Transportation Austin District.

Intensive Level Historic Resources Survey Report, US 377 Relief Route, Hood and Johnson Counties, Texas. December 2012. Prepared for TxDOT – Environmental Affairs Division.

Keystone XL Oil Pipeline Third Party Environmental Impact Statement (EIS) - Montana, South Dakota, Nebraska, Oklahoma, Kansas, Texas. On behalf of Department of State (DOS), Ms. Lapham coordinated EIS scoping meetings in six states, which included making travel arrangements, contacting venues, and media notification. In addition, she participated in a series of EIS scoping meetings held in eastern Montana and Texas. Ms. Lapham sent out invitations for consultation to more than 80 tribes and agencies, tracked all correspondence in preparation for an administrative record, and coordinated all aspects of Section 106 correspondence for this EIS project up until her departure from ENTRIX to begin graduate school.

Sunstone Pipeline Project – Wyoming, Idaho, and Oregon. In conjunction with an ENTRIX senior architectural historian, Ms. Lapham conducted the reconnaissance level survey of historic resources along an approximately 178.6 mile segment of the 590-mile long natural gas pipeline that passed through Malheur, Baker, Union, and Umatilla counties, Oregon. After identifying, documenting, and using GPS technology to map locations of more than 50 resources within the Area of Potential Effect (APE), Ms. Lapham entered all the recorded resources into the Oregon historic database.

Enbridge Alberta Clipper Pipeline Project - North Dakota, Minnesota, Wisconsin. Ms. Lapham was instrumental in coordinating, facilitating, and tracking the Section 106 process for the DOS's Enbridge Alberta Clipper Pipeline Project EIS. This EIS project entailed the construction of a 326-mile interstate crude oil transportation pipeline from the U.S.-Canada border near Neche, North Dakota to the Enbridge terminal near Superior, Wisconsin. Ms. Lapham coordinated consultation with over two dozen Native American tribes and agencies in three states, planned multiple government-to-government consultation meetings, edited and formatted cultural sections of the EIS and Section 106 Programmatic Agreement. In addition, she prepared an administrative record of all correspondence and contacts under Section 106.

On-Call Contract, King County Road Services Division (KCRSD), Archaeological and Cultural Resources - Washington. Under this cultural resources services on-call contract with KCRDS, Ms. Lapham worked on multiple projects, including the Newaukum Creek Bridge Project, Novelty Hill Road, Mink Road Project, South Park Bridge Project and Green River Trail Project. She performed archaeological and historical background research at the DAHP and the Puget Sound Archives. For the Green River Trail Project Ms. Lapham documented historic resources within the APE. In addition, she provided document editing and report production and distribution for numerous projects for KCRSD.

Keystone Oil Pipeline Third Party EIS - Midwest. On behalf of the client, DOS, Ms. Lapham assisted in the organization of the administrative record, as well as tracked incoming survey reports and tribal and State Historic Preservation Office (SHPO) correspondence for the third party EIS for the TransCanada Keystone Pipeline, LLC (Keystone).

Portland Public Schools Historic Building Assessment - Oregon. Ms. Lapham conducted background research, participated in site visits, and prepared draft text for the final report of this Historic Building Assessment of over 100 public schools in the city of Portland, Oregon. She

prepared portions of the historical context statement and wrote biographies of Portland architects for the final report.

ALEXIS REYNOLDS

Education
M.S., Historic Preservation Program, Eastern Michigan University, 2006.

B.A., American Studies, Skidmore College, 2003.

Professional Awards/Activities
Recipient, Inaugural Federal Highway Administration "Treasure Chest Award," March 2011
Co-presenter, "Demystifying 4(f)," 2008 Texas Department of Transportation Environmental Coordinators Conference (ECC)
Co-presenter, ADA/Safe Routes to School Projects," 2010 ECC Webinar
Member, National Trust for Historic Preservation

Professional Experience
Blanton & Associates, Inc., 2012 to Present
Architectural Historian. Ms. Reynolds performs intensive- and reconnaissance-level historical architectural and cultural resource management investigations. This entails conducting fieldwork, research, and surveys; identifying and documenting cultural resources; and developing historic contexts, National Register of Historic Places nominations, and HABS/HAER-level documentation.

Mead & Hunt, Inc. 2006 to 2011
In-house Contractor, Texas Department of Transportation (TxDOT). Reviewed and drafted language for National Environmental Policy Act (NEPA) documents; reviewed and commented on historic property surveys for compliance with Sections 106 and 110 regulations and the Texas Antiquities Code; drafted Section 4(f) de minimis and programmatic evaluations; generated monthly agency-wide Section 4(4) project report to the Federal Highway Administration (FHWA); conducted historical research and drafted reconnaissance- and intensive-level survey reports; coordinated projects with the State Historic Preservation Office (Texas Historical Commission) and FHWA; supervised and trained TxDOT in-house contract historians; served on Standards of Uniformity (SOU) guidance documents committee; Historic Roads Legislative Mandate team member. Ms. Reynolds' intensive report on the Fort Worth Ralston Purina factory is used as one of TxDOT's models for examining historic industrial properties.

City of Ypsilanti Planning and Development Department 2005
Historic District Commission and Planning Assistant Intern. Prepared and staffed Historic District Commission meetings, reviewed applications and applicant correspondence, and monitored property. Ms. Reynolds' city-wide architectural survey was used to qualify the City of Ypsilanti as a certified Local Government. The effort included preparing reconnaissance and intensive surveys and HABS reports as well as submitting National Register of Historic Places nominations.

Wheelock College Office of the Dean of Education 2004
Administrative Assistant.

Publications/Project Experience
Research Design for Historic Resources Survey, FM 1516 from FM 78 to FM 1976, Converse, Bexar County, Texas. September 2013. Prepared for Texas Department of Transportation San Antonio District.

Research Design for Historic Resources Studies, SH 288 Direct Connectors to the Texas Medical Center Area, Harris County, Texas. September 2013. Prepared for Texas Department of Transportation Houston District.

Reconnaissance Level Historic Resources Survey Report, SH 288 Direct Connectors to the Texas Medical Center Area, Harris County, Texas. September 2013. Prepared for Federal Highway Administration and Texas Department of Transportation Houston District.

Programmatic Section 4(f) Evaluation, US 90 at BNSF Railroad and US 90 at SH 36 Bridge Replacements, Austin County, Texas. August 2013. Prepared for Federal Highway Administration and Texas Department of Transportation.

Research Design for Historic Resources Studies, SH 288 Direct Connectors to the Texas Medical Center Area, Harris County, Texas. August 2013. Prepared for Texas Department of Transportation Houston District.

Reconnaissance Level Historic Resources Survey Report, IH 35 at Bud Stockton Loop/CR 313, Williamson County, Texas. April 2013. Prepared for Texas Department of Transportation, Austin District.

National Register of Historic Places Nomination, SH 16, Palo Pinto County, Texas. March 2013. Prepared for Texas Department of Transportation Environmental Affairs Division.

Research Design for Historic Resources Studies, IH 35 at Bud Stockton Loop/CR 313, Williamson County, Texas. February 2013. Prepared for Texas Department of Transportation Austin District.

Intensive Level Historic Resources Survey Report, US 377 Relief Route, Hood and Johnson Counties, Texas. December 2012. Prepared for TxDOT – Environmental Affairs Division.

Reconnaissance Level Historic Resources Survey Report, State Loop 82 from Thorpe Lane to Charles Austin Street, Hays County. August 2012. Prepared for Texas Department of Transportation Austin District and City of San Marcos.

Research Design for Historic Resources Studies, US 183 from US 290 to SH 71, Travis County. August 2012. Prepared for TxDOT-Environmental Affairs Division.

Addendum to Reconnaissance-level Historic Resources Survey Report, North LBJ Drive from Sessom Drive to Holland Street, San Marcos, Hays County, Texas. April 2012. Prepared for Texas Department of Transportation Austin District.

2010. Mead & Hunt. Reconnaissance Historic Resource Survey Report for US 69 at MKT Railroad, completed for the Texas Department of Transportation (Grayson County, Texas). Role: Conducted field work, research, and primary author of report.

2009. Mead & Hunt. Intensive Historic Resource Survey Report for Ralston Purina, completed for the Texas Department of Transportation (Tarrant County, Texas). Role: Conducted fieldwork, research, and primary author of report.

2009. Mead & Hunt. Standard of Uniformity for Section 4(f) De Minimis Documentation in Federal Highway Projects Review Checklist. Role: Primary author.

2009. Mead & Hunt. Section 4(f) De Minimis Impact Assessment for IH 30 from South Beltline Road to MacArthur Boulevard, completed for the Texas Department of Transportation (Dallas County, Texas.) Role: Primary author of report.

2009. Mead & Hunt. Reconnaissance Historic Resource Survey Report for FM 740 from Ranch Road to US 80, completed for the Texas Department of Transportation (Kaufman County, Texas). Role: Conducted fieldwork, research, and primary author of report.

2008. Mead & Hunt. Reconnaissance Historic Resource Survey Report for FM 741 from FM 740 (Bois D'Arc) to east of FM 548, completed for the Texas Department of Transportation (Kaufman County, Texas.) Role: Conducted fieldwork, research, and primary author of report.

2008. Mead & Hunt. Standing Consulting Party Status Agreement with Burleson County Historical Commission, completed for the Texas Department of Transportation. Role: Primary author of consulting party agreement between Texas Department of Transportation and Burleson County Historical Commission.

2008. Mead & Hunt. Reconnaissance Historic Resource Survey Report for FM 740 from FM

3097 to FM 1140, completed for the Texas Department of Transportation (Rockwall County, Texas). Role: Conducted fieldwork, research, and primary author of report.

2008. Mead & Hunt. Federal Highway Administration Programmatic Review of the Texas Department of Transportation's Section 106 Compliance Process, completed in conjunction with the Federal Highway Administration and the Texas Department of Transportation. Role: Led information gathering for archeology and historical studies sections.

2007. Mead & Hunt. Reconnaissance Historic Resource Survey Report for FM 2100 from South Diamondhead Boulevard in Crosby to 2.1 miles north of Wolf Road, completed for the Texas Department of Transportation (Harris County, Texas). Role: Conducted research and primary author of report.

2007. Mead & Hunt. Section 4(f) De Minimis Impact Assessment for SH 135 from IH 20 NW to Susan Street in Liberty City, completed for the Texas Department of Transportation (Gregg County, Texas.) Role: Primary author of assessment.

Presentations

"ADA/Safe Routes to Schools Projects." Texas Department of Transportation Environmental Coordinators' Conference, Austin, TX. 2010.

"Demystifying 4(f)." Texas Department of Transportation Environmental Coordinators' Conference, Austin, TX. 2008.

MARYELLEN K. RUSSO

Education

M.A., Public History, Appalachian State University, Boone, North Carolina, 2000

B.A., History, Appalachian State University, Boone, North Carolina, 1998

Professional Experience

Blanton & Associates, Inc., 2010 to Present

Project Manager and Senior Historian. Ms. Russo is principal investigator for intensive- and reconnaissance-level architectural history and history cultural resource management projects. This entails conducting fieldwork, research, and surveys; identifying and documenting cultural resources; and developing historic contexts, National Register of Historic Places nominations, and HABS/HAER level documentation. In addition, she trains and supervises crews and successfully prepares budgets, scopes of work, and proposals.

Mead & Hunt, Inc. 2006-2009

Project Manager and Senior Historian. Served as project manager and primary author for reconnaissance-level and intensive-level historic resources surveys for compliance with Section 106 of the National Historic Preservation Act (NHPA), as well as mitigation and special research projects for the Texas Department of Transportation (TxDOT) Environmental Affairs Division. Was responsible for scoping, budgeting, leading, and managing projects with staff members in Austin and other Mead & Hunt offices throughout the United States. Served as technical leader for large studies, including the National Register evaluation of approximately 15,000 post-World War II bridges in Texas and statewide evaluation of the pre-1966 bridges in Indiana. Completed National Environmental Policy Act (NEPA) language for historic resources surveys and Section 4(f) of the US Department of Transportation Act (Section 4(f)) Evaluations when required.

Mead & Hunt, Inc. 2004-2007

In-house Consultant to TxDOT Environmental Affairs Division. Responsible for completing historic resource surveys for compliance with Section 106 of the NHPA, the Texas Antiquities Code, and NEPA. Conducted historical research and documentation to support the identification and evaluation of historic properties. Led Section 106 coordination activities between TxDOT and the State Historic Preservation Office, and participated in activities involving the creation, management, and updating of historic property inventories. Responsible for reviewing consultant-produced reports and confirming that documentation was correctly completed in accordance with Section 106, the Texas Antiquities Code, and NEPA. Drafted appropriate language to be included in Environmental Impact Statements, Environmental Assessments, and Categorical Exclusions.

West Virginia Division of Highways, Charleston 2002-2004

Structural Historian and Project Manager. Completed historical research, field survey, and National Register evaluations of buildings, bridges, and historic districts. Responsible for drafting and finalizing Section 106, NEPA and Section 4(f) reports. Led project teams of archeologists and biologists. Reviewed historic resource survey reports produced by all historians on staff as well as all consultant-produced historic resources surveys; guided staff historians in historical research and historic property evaluations; managed and directed cultural resources consultants when hired for contract work. Coordinated and facilitated public meetings for projects with significant historic resources concerns. Responsible for correspondence with the State Historic Preservation Office for all National Register eligibility and project effects determinations.

Appalachian Cultural Museum, Boone, North Carolina 2000-2002

Historian and Assistant Director of Education. Performed historical research for temporary exhibits and new permanent exhibits. Established educational programs and led tours of the museum. Created and organized new collections management system. Aided in care of museum and objects, and contributed an article feature one of the permanent exhibits in monthly Museum publication.

Publications/Project Experience

Reconnaissance Level Historic Resources Survey Report, SH 288 Direct Connectors to the Texas Medical Center Area, Harris County, Texas. September 2013. Prepared for Federal Highway Administration and Texas Department of Transportation Houston District.

Agricultural Theme Study for Central Texas. August 2013. Prepared for the Texas Department of Transportation.

Bankhead Highway: A Historic Context of the Bankhead Highway and Other Historic Named Highways. June 2013. Prepared for the Texas Historical Commission.

Programmatic Section 4(f) Evaluation, US 90 at BNSF Railroad and US 90 at SH 36 Bridge Replacements, Austin County, Texas. August 2013. Prepared for Federal Highway Administration and Texas Department of Transportation.

Individual Section 4(f) Evaluation, SH 16 from SH 254 to Cliff Drive, Palo Pinto County, Texas. July 2013. Prepared for Federal Highway Administration and Texas Department of Transportation Fort Worth District.

National Register of Historic Places Nomination, SH 16, Palo Pinto County, Texas. March 2013. Prepared for Texas Department of Transportation Environmental Affairs Division.

Intensive Level Historic Resources Survey Report, US 377 Relief Route, Hood and Johnson Counties, Texas. January 2013. Prepared for TxDOT – Environmental Affairs Division.

Reconnaissance Level Historic Resources Survey Report, Denton Americans with Disabilities Act (ADA) Compliance Project, Denton County, Texas. December 2012. Prepared for TxDOT – Environmental Affairs Division.

Reconnaissance Level Historic Resources Survey Report, US 183 from US 290 to SH 71, Travis County, Texas. October 2012. Prepared for Texas Department of Transportation Environmental Affairs Division, Historical Studies Branch.

Reconnaissance Level Historic Resources Survey Report, State Loop 82 from Thorpe Lane to Charles Austin Street, Hays County. August 2012. Prepared for Texas Department of Transportation Austin District and City of San Marcos.

Section 106 Effects Assessment, SH 16 from Cliff Drive to SH 254, Palo Pinto County. Texas. July 2012. Prepared for Texas Department of Transportation Fort Worth District.

Non-Federal Highway Administration Categorical Exclusion, US 59 at Fountain View Drive, Harris County, Texas. May 2012. Prepared for Texas Department of Transportation Houston District.

Archeological Survey of Proposed Upgrades to the Deer Park Energy Center, Houston, Harris County, Texas. May 2012. Prepared for the Environmental Protection Agency.

Intensive Archeological Survey Supplemental Report, US 77 from SH 107 in the City of Combes to SH 44 in the City of Robstown, Cameron, Willacy, Kenedy, Kleberg, and Nueces Counties, Texas. January 2012. Prepared for Texas Department of Transportation and Texas Turnpike Authority Division.

Reconnaissance-level Resources Survey Report. US 90 from SH 61 to FM 1009, Liberty County, Texas. September 2011. Prepared for Texas Department of Transportation Environmental Affairs Division.

Reconnaissance-level Historic Resources Survey Report, Rosillo Creek NWWC (SC-15) Project, Kirby, Bexar County, Texas. September 2011. Prepared for Bexar County Flood Control and Pate Engineers, Inc.

Reconnaissance Level Historic Resources Survey Report, SH 16 from Cliff Drive to SH 254, Palo Pinto County, Texas. June 2011. Prepared for Texas Department of Transportation Fort Worth District and Rodriguez Transportation Group.

Reconnaissance Level Historic Resources Survey Supplemental Report, US 77 Upgrade Project from IH 37 in Corpus Christi to US 83 in Brownsville, Nueces, Kleberg, Kenedy, Willacy, and Cameron Counties, Texas. March 2011. Prepared for Texas Department of Transportation Pharr and Corpus Christi Districts and Texas Turnpike Authority Division.

Public Involvement Plan, SH 16 from SH 254 to Cliff Drive, Palo Pinto County, Texas. March 2011. Prepared for Texas Department of Transportation Fort Worth District and Rodriguez Transportation Group.

Reconnaissance Level Historic Resources Survey, US 190 from Spur 172 to FM 2410, Bell County, Texas. December 2009. Prepared for Texas Department of Transportation Environmental Affairs Division and Waco District.

Reconnaissance Level Historic Resources Survey Report, US 77 from IH 37 in Corpus Christi to US 83 in Brownsville, Nueces, Kleberg, Kenedy, Willacy, and Cameron Counties, Texas. November 2010. Prepared for Texas Department of Transportation Pharr and Corpus Christi Districts and Texas Turnpike Authority Division.

Reconnaissance Level Historic Resources Survey Report, North LBJ Drive from Sessom Drive to Holland Street, San Marcos, Hays County, Texas. May 2010. Prepared for Texas Department of Transportation Austin District.

Sample projects with other companies:

2009. Inventory and Evaluation of Texas Bridges, 1945 to 1965, completed for the Texas Department of Transportation (Statewide – Texas). Role: Technical leader on project, primary author of Historic Context of Texas Bridges, 1945 to 1965, primary author of the Final Evaluation Methodology, conducted and led fieldwork.

2009. Mead & Hunt. Historic Bridge Programmatic Section 4(f) Guidelines and Standards of Submission, completed for the Texas Department of Transportation. Role: Project manager and primary author of report.

2009. Mead & Hunt. FM 919 at Panther Creek Programmatic Section 4(f) Evaluation, completed for the Texas Department of Transportation (Palo Pinto County, Texas). Role: Project manager, primary author of report, and conducted fieldwork.

2009. Mead & Hunt. Young County Road 228 at Briar Creek Programmatic Section 4(f) Evaluation, completed for the Texas Department of Transportation (Young County, Texas). Role: Conducted fieldwork and primary author of report.

2008. Texas Department of Transportation. Historic Preservation Training Manual, completed in conjunction with the Texas Department of Transportation. Role: Aided Environmental Affairs Division staff in developing a training manual and presentation for NHPA Section 106, NHPA Section 110, NEPA, and Section 4(f) compliance projects.

2008. Mead & Hunt. County-wide Sidewalk Improvement Project Reconnaissance Surveys, completed for the Texas Department of Transportation (Brown, Coleman, and Comanche, Lampasas, McColloch, and Mills Counties, Texas). Role: Led fieldwork and completed quality review of reports.

2008. Mead & Hunt. Inventory and Evaluation of pre-1966 Indiana Bridges, completed for the Indiana Department of Transportation (Statewide- Indiana). Role: Completed National Register evaluations on over 1000 concrete and steel bridges.

2007. Mead & Hunt. National Register of Historic Places Nomination of John and Flora Gilbert House, prepared for the Village of Oregon, Wisconsin. Role: Conducted fieldwork and primary author of National Register nomination.

2007. Mead & Hunt. New Braunfels Outer Loop Constraints Analysis, completed for Turner Collie & Braden (New Braunfels, Texas). Role: Conducted fieldwork and completed report.

2007. Mead & Hunt. FM 1017 Widening Reconnaissance Survey, completed for Blanton & Associates, Inc (Starr County, Texas). Role: Conducted fieldwork and primary author of report.

2007. Mead & Hunt. North Wayside Drive at Halls Bayou Reconnaissance Survey, completed for Blanton & Associates, Inc (Houston, Texas). Role: Project manager and primary author of report.

2007. Mead & Hunt. Mary Street – Ollie Avenue Intensive Survey, completed for the Texas Department of Transportation (Stephenville, Texas). Role: Primary author of report and conducted fieldwork.

2006. Texas Department of Transportation. Southern Gateway Intensive Survey, completed at the Texas Department of Transportation (Dallas, Texas). Role: Project manager, conducted fieldwork, primary author of report.

2005. Texas Department of Transportation. County-wide Sidewalk Improvement Project Reconnaissance Survey, completed at the Texas Department of Transportation (Hill, Limestone, and Falls Counties, Texas). Role: Conducted fieldwork and primary author of report.

2004. West Virginia Division of Highways. Hampton Truss Bridge Reconnaissance and Intensive Surveys, completed at the West Virginia Division of Highways (Ivanhoe, West Virginia). Role: Project manager, conducted fieldwork, primary author of reports, organized and conducted public meeting.

2004. West Virginia Division of Highways. Delbarton Arch Bridge Individual Section 4(f) Evaluation, completed at the West Virginia Division of Highways (Delbarton, West Virginia). Role: Project manager, conducted fieldwork, primary author of Section 4(f) Evaluation.

2004. Delbarton Arch Bridge HAER-like Mitigation Documentation Package, completed at the West Virginia Division of Highways (Delbarton, West Virginia). Role: Project manager, conducted fieldwork, primary author of the historic bridge documentation report.

Presentations

"Reinventing Reinforced Concrete: Post-war bridges in Texas." Society of Industrial Archeology Conference, San Jose, California. 2008.

"The Engineers Speak: Oral History Strategies for Bridge Inventory Projects in Texas and Indiana." Society of Industrial Archeology Conference, Philadelphia, Pennsylvania. 2007.

"Historic Bridges." West Virginia Division of Highways Preconstruction Engineering Seminar. Canaan Valley, West Virginia. 2004.

"Section 106: Incorporating the Law into Engineering." West Virginia Division of Highways Preconstruction Engineering Seminar. Canaan Valley, West Virginia. 2003.